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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,883	03/03/2004	Hisamitsu Takagi	1442.1018	4739

21171 7590 09/01/2006

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EXAMINER

SINGH, RAMNANDAN P

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/790,883

Applicant(s)

TAKAGI, HISAMITSU

Examiner

Ramnandan Singh

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date (i) Mar. 03, 2004 and (ii) Jan. 11, 2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy in Japanese has been filed on March 03, 2004.

### *Drawings*

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Figures 1-19, 21-39, 43 and 44 do not show **legends explaining the reference numerals used in the figures**. For example, Fig. 20 shows the legends used therein to explain the figure. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 6, 9-11, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi [US 20020173281 A1].

Regarding claim 1, Kobayashi teaches a mobile radio communication apparatus shown in Fig. 1, comprising:

a first housing (11);

a second housing foldable over the first housing (12); and

a hinge part (13) that foldably connects the second housing to the first housing around a rotational center axis [Para: 0041], wherein the hinge part includes:

a one touch opening part that automatically opens the second housing from a folded state by a first angle relative to the first housing around the rotational center axis in a non-stop (i.e. free stop) motion [Figs. 1-2; Para: 0040-0047; 0073-0074; 0078; 0080; 0012; 0014; Fig. 2C; Para: 0031; Figs. 3A-3B; Para: 0032-0033]; and

an auxiliary rotational part that rotates the second housing around an orthogonal shaft (35) orthogonal to the rotational center axis of the hinge part [Fig. 1; Para: 0041; 0049; 0017-0025].

Claim 14 is essentially similar to claim 1 except for a speaker and a display part. Kobayashi further teaches the mobile apparatus having a receiver portion (62) accommodating a speaker, and a display portion (61) [Fig. 1; Para: 0040].

Regarding claim 6, Kobayashi further teaches the mobile radio communication apparatus, wherein the hinge part includes an approximately cylindrical hinge cover (i.e. tubular portion) having a slit that extends along the rotational center axis, and wherein the orthogonal shaft is inserted into the slit and the auxiliary rotational part is provided on the hinge cover [Figs. 6-8; Para: 0056-0071].

Regarding claim 9, Kobayashi further teaches the mobile radio communication apparatus, wherein the hinge part includes a free stop part that maintains the second housing at a second angle different from the first angle relative to the first housing [Para: 0074-0080].

Regarding claim 10, Kobayashi further teaches the mobile radio communication apparatus, wherein the free stop part does not work while the second housing that has been opened by the one touch opening part is being folded [Para: 0073-0074].

Regarding claim 11, Kobayashi further teaches the mobile radio communication apparatus, wherein the free stop part works while the second housing that has been opened by the one touch opening part is being folded [Para: 0078-0081].

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi as applied to claim 1 above, and further in view of Takagi et al [US 6,330,331 B1].

Regarding claim 2, Kobayashi does not teach expressly using a rotational part that includes a cam part.

Regarding claim 2, Takagi et al further teach the mobile radio communication apparatus, wherein the auxiliary rotational part includes a cam part that clicks and provides a semifixed state whenever the second housing rotates by a predetermined angle around the orthogonal shaft [Fig. 4; col. 2, lines 10-19; Figs. 7-8; col. 4, lines 57-67; col. 5, lines 28-47].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Takagi et al with Kobayashi in order to apply various degrees of biasing force of a spring through the cams [Takagi et al; col. 5, lines 44-47].

Regarding claim 3, Takagi et al further teach the mobile radio communication apparatus, comprising a first reinforcing member that covers an outer periphery of the orthogonal shaft [col. 2, lines 20-26; Fig. 3; col. 3, lines 39-67].

Regarding claim 4, Takagi et al further teach the mobile radio communication apparatus, wherein the second housing is inserted rotatably into the first reinforcing member [col. 2, lines 20-26; Fig. 3; col. 3, lines 39-67].

Regarding claim 5, Takagi et al further teach the mobile radio communication apparatus comprising a second reinforcing member at an insertion part at which the second housing is inserted into the first reinforcing member, the second reinforcing member being provided in the second housing, and the second reinforcing member reinforcing the orthogonal shaft, and being fixed onto the orthogonal shaft with the second housing [Fig. 4; col. 4, lines 1-45].

7. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi as applied to claim 1 above, and further in view of Kuroda[US 20030036365 A1].

Regarding claim 7, Kobayashi does not teach expressly using a flexible printed circuit board (PCB).

Kuroda teaches a portable communication terminal comprising a flexible printed circuit board wound around the orthogonal shaft, the flexible printed circuit board electrically connecting the first and second housings to each other [Figs. 5-8; Para: 0033; 0036-0037; 0039-0041].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Kuroda with Kobayashi in order to meet the compactness requirement by using the flexible printed circuit board, instead of complicated wiring, electrically connecting the first and second housings to each other Kuroda; Para: 0007].

Regarding claim 8, Kuroda further teaches the mobile device, wherein the flexible printed circuit board is wound around the rotational center axis of the hinge part [Para: 0033; 00410042].

8. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi as applied to claim 1 above, and further in view of Kawamoto [US 6,952,860 B2].

Regarding claim 12, Kobayashi does not teach expressly using a hinge with a damper.



Kawamoto teaches a mobile radio communication apparatus, wherein the hinge part further includes a damper part that brakes an opening action of the second housing by the one touch opening part [Figs. 1-5; col. 2, line 48 to col. 3, line 3; col. 6, lines 36-47; Abstract].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Kawamoto with Kobayashi in order to avoid an inconvenience by providing a damper mechanism [Kawamoto: col. 1, lines 36-40].

Regarding claim 8, Kawamoto further teaches the mobile device, wherein the damper part brakes the second housing when the second housing forms a third angle or larger relative to the first housing [col. 1, lines 48-50; col. 3, lines 37-50; col. 4, line 65 to col. 5, line 40; col. 6, lines 36-47].

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(i) Horne [US 5,983,083] teaches a a foldable radiotelephone using a hinge [Whole document]; and

(ii) Nishimura [US 20060063570 A1] teaches a foldable mobile communication device [Whole document].

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramnandan Singh whose telephone number is (571) 272-7529. The examiner can normally be reached on M-TH (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ramnandan Singh  
Examiner  
Art Unit 2614

A handwritten signature in black ink, appearing to be 'RNS' with a stylized flourish underneath.